

CLAIMS

We claim:

1. An assembly for rapidly delivering water to a basin, the assembly comprising:

5 a basin;

a hot water storage tank;

a cold water storage tank;

a system for controlling the flow of water from the storage tanks to the basin when it is desired to supply the basin from one or more of the storage tanks; and

10 means for expediting the flow of water from at least one of the storage tanks to the basin when it is desired to supply water there from to the basin, the means being selected from the group consisting of:

15 (a) structures retaining at least one of said storage tanks at a position above at least a portion of the basin such that gravity can facilitate water flow from that tank to the basin when water is present in that tank;

20 (b) conduit connecting the at least one of said storage tanks to the basin which has a portion with a cross-sectional area of at least five square inches;

(c) a pressure pump; and

25 (d) delivery ports adjacent the basin for delivering water to the basin from said at least one of said storage tanks, the ports having an outlet cross-sectional area totaling at least five square inches;

wherein at least one of the storage tanks is dedicated to the assembly.

30 2. The assembly of claim 1, wherein both of the storage tanks are dedicated to the assembly.

3. The assembly of claim 1, wherein at least one of the storage tanks is positioned within twenty feet of the basin.

4. The assembly of claim 3, wherein at least one of the storage tanks is positioned within ten feet of the basin.

5. The assembly of claim 4, wherein both of the storage tanks are positioned within ten feet of the basin.

6. The assembly of claim 1, wherein the assembly further comprises controls for monitoring temperature of water in the basin, for monitoring height of water in the basin, for initiating refilling of the storage tanks, for sensing flow from the basin drain, for sensing the presence of non-water objects within the basin, and/or for controlling heating of water in the hot water storage tank.

7. The assembly of claim 1, wherein the basin is a basin of a bathtub, whirlpool, spa or other plumbing fixture.

8. The assembly of claim 1, wherein the basin is a drum in a washing machine.

9. The assembly of claim 1, further comprising means for inhibiting resupply of water to at least one of the storage tanks when the amount of water in the basin is in excess of a specified amount.

10. The assembly of claim 1, wherein the assembly can deliver water from the storage tanks to the basin at a rate exceeding 75 gallons/minute.

11. The assembly of claim 10, wherein the assembly can deliver water from the storage tanks to the basin at a rate exceeding 500 gallons/minute.

12. The assembly of claim 11, wherein the assembly can deliver water from the storage tanks to the basin at a rate exceeding 750 gallons/minute.

13. The assembly of claim 1, wherein the assembly can deliver water to the basin in a waterfall manner.

14. The assembly of claim 13, wherein the waterfall is provided at multiple sides of the basin.

15. The assembly of claim 1, wherein the hot and cold water from the storage tanks can be mixed prior to entering the basin.

5 16. The assembly of claim 1, wherein the means for expediting is the pressure pump.

17. The assembly of claim 16, wherein the pump is a variable speed pump.

18. The assembly of claim 16, wherein the pump is a centrifugal pump.

10 19. The assembly of claim 16, wherein the pump is capable of supplying up to 800 gallons/minute of water.

20. The assembly of claim 1, wherein at least one of the delivery ports is selected from the group consisting of jet orifices, drain openings and openings
15 of circulation lines.

21. The assembly of claim 1, wherein the hot and cold water storage tanks are vented during a basin fill cycle.

22. An assembly for rapidly delivering water to a basin, the assembly comprising:

a basin selected from the group consisting of washing machine drums, bathtubs, whirlpools, spas and other plumbing fixtures;

a water storage tank dedicated to the assembly; and

a system capable of delivering water from the tank to the basin at a rate of at least 75 gallons/minute.

23. The assembly of claim 22, wherein the system comprises a feature selected from the group consisting of:

(a) a structure retaining the tank at a position above at least a portion of the basin such that gravity can facilitate water flow from the tank to the basin when water is present in the tank;

(b) conduit connecting the tank to the basin having a portion with a passageway cross-sectional area of at least five square inches;

(c) a pressure pump; and

(d) delivery ports adjacent the basin having an outlet cross-sectional area totaling at least 5 square inches.

24. The assembly of claim 23, wherein the feature is the pressure pump.

25. The assembly of claim 23, wherein at least one of the delivery ports is selected from the group consisting of jet orifices, drain openings and openings of circulation lines.

26. The assembly of claim 22, wherein the tank is a water storage tank.

27. The assembly of claim 26, further comprising a heater for controlling the temperature of water in the tank.

28. The assembly of claim 22, wherein the assembly comprises two water storage tanks, one storage tank being for containing cold water and the other storage tank being for containing hot water.

5 29. The assembly of claim 28, wherein both of the storage tanks are dedicated to the assembly.

30. The assembly of claim 28, wherein the hot and cold water from the storage tanks can be mixed prior to entering the basin.

10 31. The assembly of claim 28, wherein the storage tanks are vented during a basin fill cycle.

32. The assembly of claim 22, wherein the tank is a conduit.

15 33. The assembly of claim 32, wherein the conduit has a passageway cross-sectional area of at least 5 square inches.

34. The assembly of claim 32, further including a heater for heating a length of the conduit.

20 35. The assembly of claim 22, wherein the assembly further comprises controls for monitoring temperature of water in the basin, for monitoring height of water in the basin, for sensing flow from the basin drain, for sensing the presence of non-water objects within the basin, and/or for controlling heating of water in the tank.

25 36. The assembly of claim 22, further comprising means for inhibiting resupply of water to the tank when the amount of water in the basin is in excess of a specified amount.

30 37. The assembly of claim 22, wherein the assembly is capable of delivering water from the tank to the basin at a rate exceeding 500 gallons/minute.

38. The assembly of claim 22, wherein the assembly can deliver water to the basin in a waterfall manner.

39. An assembly for rapidly delivering water to a basin, the assembly comprising:

a basin selected from the group consisting of washing machine drums, bathtubs, whirlpools, spas and other plumbing fixtures;

a water conduit defining a passageway cross-sectional area of at least 5 square inches; and

a system capable of delivering water from the conduit to the basin at a rate of at least 75 gallons/minute.

40. The assembly of claim 40, wherein the conduit extends between the basin and a utility water line to the exterior of a building housing the basin.

41. The assembly of claim 41, further comprising a heater for heating a length of the conduit.

42. The assembly of claim 42, wherein the heater is in-line with the conduit.

43. The assembly of claim 39, wherein the conduit is dedicated to the assembly.